

THE CLAIMS

Having thus described my invention what I claim as new, useful and non-obvious and, accordingly, secure by Letters Patent of the United States is:

1. A retaining wall system, definable with reference to an x, y, z Cartesian coordinate system, for stabilizing an earthen wall, said system comprising:
  - (a) a y-axis footing having an x-axis width, said footing embedded within the earth along a y-z plane at a base of an earthen mass to be retained by said system, said footing having a flat xy upper surface thereof; and
  - (b) upon said upper surface of said footing, a retaining wall comprising a multiplicity of courses of constructional blocks, each block thereof defining a generally solid rectangular exterior configuration, an x-axis thereof defining a width axis of said wall, a y-axis thereof defining a segment of a length of said wall, and a z-axis thereof defining a segment of a height of said wall, in which one xz end surface of each block comprises a positive y-axis deep key geometry and each opposing xz end surface thereof comprises a negative y-axis deep key geometry complementally interlockable to a part of a substantially planar xy geo-grid positioned within at least one xy plane between said retaining wall and said earthen mass to be retained, a y-axis edge of said geo-grid rigidly secured between opposing surfaces of y-axis courses of blocks of said retaining wall, in which elements of said grid near to said y-axis edge thereof define x and y axes separations proportioned for complemental interposition between successive z-axis recesses and interlocking blocks of opposing z-axis courses,

5           whereby securing said y-axis edge of said geo-grid is secured between adjacent z-axis courses of blocks of said retaining wall.

2.       The system as recited in Claim 1, further comprising:

          mortar placed between opposing xy surfaces of said blocks,

10           thereby providing a substantially rigid and load resistant interlock of each geo-grid between vertically contiguous courses of said blocks when joined together as components of said retaining wall system.

3.       The system as recited in Claim 2, in which:

15           a z-axis length of each of said male members of said lower xy surface of each block exceeds a z-axis depth of contiguous xy surface recesses of a vertically contiguous course to thereby provide space for insertion of said mortar between opposing xy surfaces of blocks of said courses of said retaining wall.

20       4.       The system as recited in Claim 2, in which:

          a y-axis length of said positive y-axis deep key geometry exceeds a y-axis depth of said negative deep key geometry, thereby providing space for the insertion of mortar between opposing xz brick surfaces within a given course of said retaining wall.

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5.       The system as recited in Claim 4, in which each of said deep key geometries each comprise a trapezoidal structure.